

NODE=B064

N(1675) 5/2⁻

$$I(J^P) = \frac{1}{2}(\frac{5}{2}^-)$$

Status: ***

Most of the results published before 1975 were last included in our 1982 edition, Physics Letters **111B** 1 (1982). Some further obsolete results published before 1984 were last included in our 2006 edition, Journal of Physics, G **33** 1 (2006).

NODE=B064

N(1675) BREIT-WIGNER MASS

NODE=B064M

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
1670 to 1680 (\approx 1675) OUR ESTIMATE			
1664 \pm 5	ANISOVICH	12A	DPWA Multichannel
1674.1 \pm 0.2	ARNDT	06	DPWA $\pi N \rightarrow \pi N, \eta N$
1675 \pm 10	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$
1679 \pm 8	HOEHLER	79	IPWA $\pi N \rightarrow \pi N$
• • • We do not use the following data for averages, fits, limits, etc. • • •			
1679 \pm 1	SHRESTHA	12A	DPWA Multichannel
1678 \pm 5	ANISOVICH	10	DPWA Multichannel
1679 \pm 9	BATINIC	10	DPWA $\pi N \rightarrow N\pi, N\eta$
1678 \pm 15	THOMA	08	DPWA Multichannel
1676.2 \pm 0.6	ARNDT	04	DPWA $\pi N \rightarrow \pi N, \eta N$
1685 \pm 4	VRANA	00	DPWA Multichannel
1673 \pm 5	ARNDT	96	IPWA $\gamma N \rightarrow \pi N$
1673	ARNDT	95	DPWA $\pi N \rightarrow N\pi$
1666	LI	93	IPWA $\gamma N \rightarrow \pi N$
1676 \pm 2	MANLEY	92	IPWA $\pi N \rightarrow \pi N & N\pi\pi$
1670	SAXON	80	DPWA $\pi^- p \rightarrow \Lambda K^0$
1650	¹ LONGACRE	77	IPWA $\pi N \rightarrow N\pi\pi$
1660	² LONGACRE	75	IPWA $\pi N \rightarrow N\pi\pi$

***N(1675) BREIT-WIGNER WIDTH***

NODE=B064W

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
130 to 165 (\approx 150) OUR ESTIMATE			
152 \pm 7	ANISOVICH	12A	DPWA Multichannel
146.5 \pm 1.0	ARNDT	06	DPWA $\pi N \rightarrow \pi N, \eta N$
160 \pm 20	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$
120 \pm 15	HOEHLER	79	IPWA $\pi N \rightarrow \pi N$
• • • We do not use the following data for averages, fits, limits, etc. • • •			
145 \pm 4	SHRESTHA	12A	DPWA Multichannel
177 \pm 15	ANISOVICH	10	DPWA Multichannel
152 \pm 8	BATINIC	10	DPWA $\pi N \rightarrow N\pi, N\eta$
220 \pm 25	THOMA	08	DPWA Multichannel
151.8 \pm 3.0	ARNDT	04	DPWA $\pi N \rightarrow \pi N, \eta N$
131 \pm 10	VRANA	00	DPWA Multichannel
154 \pm 7	ARNDT	96	IPWA $\gamma N \rightarrow \pi N$
154	ARNDT	95	DPWA $\pi N \rightarrow N\pi$
136	LI	93	IPWA $\gamma N \rightarrow \pi N$
159 \pm 7	MANLEY	92	IPWA $\pi N \rightarrow \pi N & N\pi\pi$
40	SAXON	80	DPWA $\pi^- p \rightarrow \Lambda K^0$
130	¹ LONGACRE	77	IPWA $\pi N \rightarrow N\pi\pi$
150	² LONGACRE	75	IPWA $\pi N \rightarrow N\pi\pi$

***N(1675) POLE POSITION***

NODE=B064215

REAL PART VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
1655 to 1665 (\approx 1660) OUR ESTIMATE			
1654 \pm 4	ANISOVICH	12A	DPWA Multichannel
1657	ARNDT	06	DPWA $\pi N \rightarrow \pi N, \eta N$
1656	³ HOEHLER	93	ARGD $\pi N \rightarrow \pi N$
1660 \pm 10	CUTKOSKY	80	IPWA $\pi N \rightarrow \pi N$

NODE=B064RE

NODE=B064RE

→ UNCHECKED ←

• • • We do not use the following data for averages, fits, limits, etc. • • •

1656	SHRESTHA	12A	DPWA	Multichannel
1650± 5	ANISOVICH	10	DPWA	Multichannel
1658± 9	BATINIC	10	DPWA	$\pi N \rightarrow N\pi, N\eta$
1639±10	THOMA	08	DPWA	Multichannel
1659	ARNDT	04	DPWA	$\pi N \rightarrow \pi N, \eta N$
1674	VRANA	00	DPWA	Multichannel
1663	ARNDT	95	DPWA	$\pi N \rightarrow N\pi$
1655	ARNDT	91	DPWA	$\pi N \rightarrow \pi N$ Soln SM90
1663 or 1668	⁴ LONGACRE	78	IPWA	$\pi N \rightarrow N\pi\pi$
1649 or 1650	¹ LONGACRE	77	IPWA	$\pi N \rightarrow N\pi\pi$

-2xIMAGINARY PART

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
125 to 150 (≈ 135) OUR ESTIMATE			

151± 5	ANISOVICH	12A	DPWA	Multichannel
139	ARNDT	06	DPWA	$\pi N \rightarrow \pi N, \eta N$
126	³ HOEHLER	93	ARGD	$\pi N \rightarrow \pi N$
140±10	CUTKOSKY	80	IPWA	$\pi N \rightarrow \pi N$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
128	SHRESTHA	12A	DPWA	Multichannel
143± 7	ANISOVICH	10	DPWA	Multichannel
137± 7	BATINIC	10	DPWA	$\pi N \rightarrow N\pi, N\eta$
180±20	THOMA	08	DPWA	Multichannel
146	ARNDT	04	DPWA	$\pi N \rightarrow \pi N, \eta N$
120	VRANA	00	DPWA	Multichannel
152	ARNDT	95	DPWA	$\pi N \rightarrow N\pi$
124	ARNDT	91	DPWA	$\pi N \rightarrow \pi N$ Soln SM90
146 or 171	⁴ LONGACRE	78	IPWA	$\pi N \rightarrow N\pi\pi$
127 or 127	¹ LONGACRE	77	IPWA	$\pi N \rightarrow N\pi\pi$

NODE=B064IM

NODE=B064IM

→ UNCHECKED ←

N(1675) ELASTIC POLE RESIDUE

MODULUS | r |

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
27±5 OUR ESTIMATE			

28±1	ANISOVICH	12A	DPWA	Multichannel
27	ARNDT	06	DPWA	$\pi N \rightarrow \pi N, \eta N$
23	HOEHLER	93	ARGD	$\pi N \rightarrow \pi N$
31±5	CUTKOSKY	80	IPWA	$\pi N \rightarrow \pi N$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
25	BATINIC	10	DPWA	$\pi N \rightarrow N\pi, N\eta$
29	ARNDT	04	DPWA	$\pi N \rightarrow \pi N, \eta N$
29	ARNDT	95	DPWA	$\pi N \rightarrow N\pi$
28	ARNDT	91	DPWA	$\pi N \rightarrow \pi N$ Soln SM90

NODE=B064220

NODE=B064RER

NODE=B064RER

→ UNCHECKED ←

PHASE θ

VALUE (°)	DOCUMENT ID	TECN	COMMENT
-25± 6 OUR ESTIMATE			

-26± 4	ANISOVICH	12A	DPWA	Multichannel
-21	ARNDT	06	DPWA	$\pi N \rightarrow \pi N, \eta N$
-22	HOEHLER	93	ARGD	$\pi N \rightarrow \pi N$
-30±10	CUTKOSKY	80	IPWA	$\pi N \rightarrow \pi N$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
-16	BATINIC	10	DPWA	$\pi N \rightarrow N\pi, N\eta$
-22	ARNDT	04	DPWA	$\pi N \rightarrow \pi N, \eta N$
- 6	ARNDT	95	DPWA	$\pi N \rightarrow N\pi$
-17	ARNDT	91	DPWA	$\pi N \rightarrow \pi N$ Soln SM90

NODE=B064IMR

NODE=B064IMR

→ UNCHECKED ←

N(1675) INELASTIC POLE RESIDUE

The "normalized residue" is the residue divided by $\Gamma_{pole}/2$.

Normalized residue in $N\pi \rightarrow N(1675) \rightarrow \Delta\pi, D\text{-wave}$

MODULUS (%)	PHASE (°)	DOCUMENT ID	TECN	COMMENT
33±5	82 ± 10	ANISOVICH	12A	DPWA Multichannel

NODE=B064240

NODE=B064240

NODE=B064RS1

NODE=B064RS1

Normalized residue in $N\pi \rightarrow N(1675) \rightarrow N\sigma$

<u>MODULUS (%)</u>	<u>PHASE (°)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
15±4	132 ± 18	ANISOVICH	12A DPWA	Multichannel

 $N(1675)$ DECAY MODES

The following branching fractions are our estimates, not fits or averages.

Mode	Fraction (Γ_i/Γ)	
$\Gamma_1 N\pi$	35–45 %	DESIG=1;OUR EST
$\Gamma_2 N\eta$	(0.0 ± 1.0) %	DESIG=2
$\Gamma_3 \Lambda K$	<1 %	DESIG=3;OUR EST
$\Gamma_4 \Sigma K$		DESIG=4
$\Gamma_5 N\pi\pi$	50–60 %	DESIG=5;OUR EST
$\Gamma_6 \Delta\pi$	50–60 %	DESIG=181;OUR EST
$\Gamma_7 \Delta(1232)\pi$, D-wave	(50 ± 15) %	DESIG=6
$\Gamma_8 \Delta(1232)\pi$, G-wave		DESIG=7
$\Gamma_9 N\rho$	< 1–3 %	DESIG=182;OUR EST
$\Gamma_{10} N\rho$, S=1/2, D-wave	(0.0 ± 1.0) %	DESIG=8
$\Gamma_{11} N\rho$, S=3/2, D-wave	(1.0 ± 1.0) %	DESIG=9
$\Gamma_{12} N\rho$, S=3/2, G-wave		DESIG=10
$\Gamma_{13} N(\pi\pi)_{S\text{-wave}}^{I=0}$	(7.0 ± 3.0) %	DESIG=11
$\Gamma_{14} p\gamma$	0–0.02 %	DESIG=184;OUR EST
$\Gamma_{15} p\gamma$, helicity=1/2	0–0.01 %	DESIG=13;OUR EST
$\Gamma_{16} p\gamma$, helicity=3/2	0–0.01 %	DESIG=14;OUR EST
$\Gamma_{17} n\gamma$	0–0.15 %	DESIG=185;OUR EST
$\Gamma_{18} n\gamma$, helicity=1/2	0–0.05 %	DESIG=15;OUR EST
$\Gamma_{19} n\gamma$, helicity=3/2	0–0.10 %	DESIG=16;OUR EST

 $N(1675)$ BRANCHING RATIOS **$\Gamma(N\pi)/\Gamma_{\text{total}}$** **35 to 45 OUR ESTIMATE**

VALUE (%)	DOCUMENT ID	TECN	COMMENT	Γ_1/Γ
40 ± 3	ANISOVICH	12A DPWA	Multichannel	
39.3 ± 0.1	ARNDT	06 DPWA	$\pi N \rightarrow \pi N$, ηN	
38 ± 5	CUTKOSKY	80 IPWA	$\pi N \rightarrow \pi N$	
38 ± 3	HOEHLER	79 IPWA	$\pi N \rightarrow \pi N$	
• • • We do not use the following data for averages, fits, limits, etc. • • •				
38.6 ± 0.6	SHRESTHA	12A DPWA	Multichannel	
37 ± 5	ANISOVICH	10 DPWA	Multichannel	
35 ± 4	BATINIC	10 DPWA	$\pi N \rightarrow N\pi$, $N\eta$	
30 ± 8	THOMA	08 DPWA	Multichannel	
40.0 ± 0.2	ARNDT	04 DPWA	$\pi N \rightarrow \pi N$, ηN	
35 ± 1	VRANA	00 DPWA	Multichannel	
38	ARNDT	95 DPWA	$\pi N \rightarrow N\pi$	
47 ± 2	MANLEY	92 IPWA	$\pi N \rightarrow \pi N$ & $N\pi\pi$	

 $\Gamma(N\eta)/\Gamma_{\text{total}}$ **0 ± 1**

VALUE (%)	DOCUMENT ID	TECN	COMMENT	Γ_2/Γ
0 ± 1	VRANA	00 DPWA	Multichannel	
• • • We do not use the following data for averages, fits, limits, etc. • • •				
<1	SHRESTHA	12A DPWA	Multichannel	
0.1 ± 0.1	BATINIC	10 DPWA	$\pi N \rightarrow N\pi$, $N\eta$	
3 ± 3	THOMA	08 DPWA	Multichannel	

NODE=B064RS2

NODE=B064RS2

NODE=B064225;NODE=B064

NODE=B064

DESIG=1;OUR EST

DESIG=2

DESIG=3;OUR EST

DESIG=4

DESIG=5;OUR EST

DESIG=181;OUR EST

DESIG=6

DESIG=7

DESIG=182;OUR EST

DESIG=8

DESIG=9

DESIG=10

DESIG=11

DESIG=184;OUR EST

DESIG=13;OUR EST

DESIG=14;OUR EST

DESIG=185;OUR EST

DESIG=15;OUR EST

DESIG=16;OUR EST

NODE=B064230

NODE=B064R1

NODE=B064R1

→ UNCHECKED ←

NODE=B064R10

NODE=B064R10

$(\Gamma_f/\Gamma)^{1/2}/\Gamma_{\text{total}}$ in $N\pi \rightarrow N(1675) \rightarrow \Lambda K$	$(\Gamma_1\Gamma_3)^{1/2}/\Gamma$		
VALUE	DOCUMENT ID	TECN	COMMENT
± 0.04 to ± 0.08 OUR ESTIMATE			
-0.01	BELL	83	DPWA $\pi^- p \rightarrow \Lambda K^0$
+0.036	5 SAXON	80	DPWA $\pi^- p \rightarrow \Lambda K^0$
$\bullet \bullet \bullet$ We do not use the following data for averages, fits, limits, etc. $\bullet \bullet \bullet$			
-0.03 ± 0.01	SHRESTHA	12A	DPWA Multichannel

Note: Signs of couplings from $\pi N \rightarrow N\pi\pi$ analyses were changed in the 1986 edition to agree with the baryon-first convention; the overall phase ambiguity is resolved by choosing a negative sign for the $\Delta(1620)$ S_{31} coupling to $\Delta(1232)\pi$.

$(\Gamma_f/\Gamma)^{1/2}/\Gamma_{\text{total}}$ in $N\pi \rightarrow N(1675) \rightarrow \Delta(1232)\pi$, D-wave	$(\Gamma_1\Gamma_7)^{1/2}/\Gamma$		
VALUE	DOCUMENT ID	TECN	COMMENT
± 0.46 to ± 0.50 OUR ESTIMATE			
+0.46	^{1,6} LONGACRE	77	IPWA $\pi N \rightarrow N\pi\pi$
+0.50	² LONGACRE	75	IPWA $\pi N \rightarrow N\pi\pi$
$\bullet \bullet \bullet$ We do not use the following data for averages, fits, limits, etc. $\bullet \bullet \bullet$			
+0.496 ± 0.003	MANLEY	92	IPWA $\pi N \rightarrow \pi N$ & $N\pi\pi$

$\Gamma(\Delta(1232)\pi, D\text{-wave})/\Gamma_{\text{total}}$	Γ_7/Γ		
VALUE (%)	DOCUMENT ID	TECN	COMMENT
50 ± 15 OUR ESTIMATE			
33 \pm 8	ANISOVICH	12A	DPWA Multichannel
63 \pm 2	VRANA	00	DPWA Multichannel
$\bullet \bullet \bullet$ We do not use the following data for averages, fits, limits, etc. $\bullet \bullet \bullet$			
46 \pm 1	SHRESTHA	12A	DPWA Multichannel
24 \pm 8	THOMA	08	DPWA Multichannel

$(\Gamma_f/\Gamma)^{1/2}/\Gamma_{\text{total}}$ in $N\pi \rightarrow N(1675) \rightarrow N\rho, S=1/2$, D-wave	$(\Gamma_1\Gamma_{10})^{1/2}/\Gamma$		
VALUE	DOCUMENT ID	TECN	COMMENT
$\bullet \bullet \bullet$ We do not use the following data for averages, fits, limits, etc. $\bullet \bullet \bullet$			
+0.04 ± 0.02	MANLEY	92	IPWA $\pi N \rightarrow \pi N$ & $N\pi\pi$

$\Gamma(N\rho, S=1/2, D\text{-wave})/\Gamma_{\text{total}}$	Γ_{10}/Γ		
VALUE (%)	DOCUMENT ID	TECN	COMMENT
0 ± 1			
0 ± 1	VRANA	00	DPWA Multichannel
$\bullet \bullet \bullet$ We do not use the following data for averages, fits, limits, etc. $\bullet \bullet \bullet$			
<1	SHRESTHA	12A	DPWA Multichannel

$(\Gamma_f/\Gamma)^{1/2}/\Gamma_{\text{total}}$ in $N\pi \rightarrow N(1675) \rightarrow N\rho, S=3/2$, D-wave	$(\Gamma_1\Gamma_{11})^{1/2}/\Gamma$		
VALUE	DOCUMENT ID	TECN	COMMENT
-0.12 to -0.06 OUR ESTIMATE			
-0.15	^{1,6} LONGACRE	77	IPWA $\pi N \rightarrow N\pi\pi$
$\bullet \bullet \bullet$ We do not use the following data for averages, fits, limits, etc. $\bullet \bullet \bullet$			
-0.03 ± 0.02	MANLEY	92	IPWA $\pi N \rightarrow \pi N$ & $N\pi\pi$

$\Gamma(N\rho, S=3/2, D\text{-wave})/\Gamma_{\text{total}}$	Γ_{11}/Γ		
VALUE (%)	DOCUMENT ID	TECN	COMMENT
1 ± 1			
1 ± 1	VRANA	00	DPWA Multichannel
$\bullet \bullet \bullet$ We do not use the following data for averages, fits, limits, etc. $\bullet \bullet \bullet$			
<1	SHRESTHA	12A	DPWA Multichannel

$(\Gamma_f/\Gamma)^{1/2}/\Gamma_{\text{total}}$ in $N\pi \rightarrow N(1675) \rightarrow N(\pi\pi)_{S\text{-wave}}^{I=0}$	$(\Gamma_1\Gamma_{13})^{1/2}/\Gamma$		
VALUE	DOCUMENT ID	TECN	COMMENT
+0.03	^{1,6} LONGACRE	77	IPWA $\pi N \rightarrow N\pi\pi$

$\Gamma(N(\pi\pi)_{S\text{-wave}}^{I=0})/\Gamma_{\text{total}}$	Γ_{13}/Γ		
VALUE (%)	DOCUMENT ID	TECN	COMMENT
7 ± 3	ANISOVICH	12A	DPWA Multichannel

NODE=B064R3
NODE=B064R3
→ UNCHECKED ←

NODE=B064310

NODE=B064R5
NODE=B064R5
→ UNCHECKED ←

NODE=B064R13
NODE=B064R13
→ UNCHECKED ←

NODE=B064R9
NODE=B064R9

NODE=B064R11
NODE=B064R11
→ UNCHECKED ←

NODE=B064R12
NODE=B064R12
→ UNCHECKED ←

NODE=B064R7
NODE=B064R7

NODE=B064R14
NODE=B064R14

N(1675) PHOTON DECAY AMPLITUDES

Papers on γN amplitudes predating 1981 may be found in our 2006 edition,
Journal of Physics, G **33** 1 (2006).

$N(1675) \rightarrow p\gamma$, helicity-1/2 amplitude $A_{1/2}$

VALUE (GeV ^{-1/2})	DOCUMENT ID	TECN	COMMENT
+0.019±0.008 OUR ESTIMATE			
0.024±0.003	ANISOVICH	12A	DPWA Multichannel
0.013±0.001	WORKMAN	12A	DPWA $\gamma N \rightarrow N\pi$
0.018±0.002	DUGGER	07	DPWA $\gamma N \rightarrow \pi N$
0.021±0.011	CRAWFORD	83	IPWA $\gamma N \rightarrow \pi N$
0.034±0.005	AWAJI	81	DPWA $\gamma N \rightarrow \pi N$
• • • We do not use the following data for averages, fits, limits, etc. • • •			
0.011±0.001	SHRESTHA	12A	DPWA Multichannel
0.021±0.004	ANISOVICH	10	DPWA Multichannel
0.015	DRECHSEL	07	DPWA $\gamma N \rightarrow \pi N$
0.015±0.010	ARNDT	96	IPWA $\gamma N \rightarrow \pi N$
0.012±0.002	LI	93	IPWA $\gamma N \rightarrow \pi N$

NODE=B064235

NODE=B064235

NODE=B064A1

NODE=B064A1

→ UNCHECKED ←

$N(1675) \rightarrow p\gamma$, helicity-3/2 amplitude $A_{3/2}$

VALUE (GeV ^{-1/2})	DOCUMENT ID	TECN	COMMENT
+0.015±0.009 OUR ESTIMATE			
0.025±0.007	ANISOVICH	12A	DPWA Multichannel
0.016±0.001	WORKMAN	12A	DPWA $\gamma N \rightarrow N\pi$
0.021±0.001	DUGGER	07	DPWA $\gamma N \rightarrow \pi N$
0.015±0.009	CRAWFORD	83	IPWA $\gamma N \rightarrow \pi N$
0.024±0.008	AWAJI	81	DPWA $\gamma N \rightarrow \pi N$
• • • We do not use the following data for averages, fits, limits, etc. • • •			
0.020±0.001	SHRESTHA	12A	DPWA Multichannel
0.024±0.008	ANISOVICH	10	DPWA Multichannel
0.022	DRECHSEL	07	DPWA $\gamma N \rightarrow \pi N$
0.010±0.007	ARNDT	96	IPWA $\gamma N \rightarrow \pi N$
0.021±0.002	LI	93	IPWA $\gamma N \rightarrow \pi N$

NODE=B064A2

NODE=B064A2

→ UNCHECKED ←

$N(1675) \rightarrow n\gamma$, helicity-1/2 amplitude $A_{1/2}$

VALUE (GeV ^{-1/2})	DOCUMENT ID	TECN	COMMENT
-0.043±0.012 OUR ESTIMATE			
-0.058±0.002	CHEN	12A	DPWA $\gamma N \rightarrow \pi N$
-0.057±0.024	AWAJI	81	DPWA $\gamma N \rightarrow \pi N$
-0.033±0.004	FUJII	81	DPWA $\gamma N \rightarrow \pi N$
• • • We do not use the following data for averages, fits, limits, etc. • • •			
-0.040±0.004	SHRESTHA	12A	DPWA Multichannel
-0.062	DRECHSEL	07	DPWA $\gamma N \rightarrow \pi N$
-0.049±0.010	ARNDT	96	IPWA $\gamma N \rightarrow \pi N$
-0.060±0.003	LI	93	IPWA $\gamma N \rightarrow \pi N$

NODE=B064A3

NODE=B064A3

→ UNCHECKED ←

$N(1675) \rightarrow n\gamma$, helicity-3/2 amplitude $A_{3/2}$

VALUE (GeV ^{-1/2})	DOCUMENT ID	TECN	COMMENT
-0.058±0.013 OUR ESTIMATE			
-0.080±0.005	CHEN	12A	DPWA $\gamma N \rightarrow \pi N$
-0.077±0.018	AWAJI	81	DPWA $\gamma N \rightarrow \pi N$
-0.069±0.004	FUJII	81	DPWA $\gamma N \rightarrow \pi N$
• • • We do not use the following data for averages, fits, limits, etc. • • •			
-0.068±0.004	SHRESTHA	12A	DPWA Multichannel
-0.084	DRECHSEL	07	DPWA $\gamma N \rightarrow \pi N$
-0.051±0.010	ARNDT	96	IPWA $\gamma N \rightarrow \pi N$
-0.074±0.003	LI	93	IPWA $\gamma N \rightarrow \pi N$

NODE=B064A4

NODE=B064A4

→ UNCHECKED ←

N(1675) FOOTNOTES

- ¹ LONGACRE 77 pole positions are from a search for poles in the unitarized T-matrix; the first (second) value uses, in addition to $\pi N \rightarrow N\pi\pi$ data, elastic amplitudes from a Saclay (CERN) partial-wave analysis. The other LONGACRE 77 values are from eyeball fits with Breit-Wigner circles to the T-matrix amplitudes.
- ² From method II of LONGACRE 75: eyeball fits with Breit-Wigner circles to the T-matrix amplitudes.
- ³ See HOEHLER 93 for a detailed discussion of the evidence for and the pole parameters of N and Δ resonances as determined from Argand diagrams of πN elastic partial-wave amplitudes and from plots of the speeds with which the amplitudes traverse the diagrams.
- ⁴ LONGACRE 78 values are from a search for poles in the unitarized T-matrix. The first (second) value uses, in addition to $\pi N \rightarrow N\pi\pi$ data, elastic amplitudes from a Saclay (CERN) partial-wave analysis.
- ⁵ SAXON 80 finds the coupling phase is near 90°.
- ⁶ LONGACRE 77 considers this coupling to be well determined.

N(1675) REFERENCES

For early references, see Physics Letters **111B** 1 (1982).

ANISOVICH	12A	EPJ A48 15	A.V. Anisovich <i>et al.</i>	(BONN, PNPI)	REFID=54041
CHEN	12A	PR C86 015206	W. Chen <i>et al.</i>	(DUKE, GWU, MSST, ITEP+)	REFID=54337
SHRESTHA	12A	PR C86 055203	M. Shrestha, D.M. Manley	(KSU)	REFID=54862
WORKMAN	12A	PR C86 015202	R. Workman <i>et al.</i>	(GWU)	REFID=54335
ANISOVICH	10	EPJ A44 203	A.V. Anisovich <i>et al.</i>	(BONN, PNPI)	REFID=53280
BATINIC	10	PR C82 038203	M. Batinic <i>et al.</i>	(ZAGR)	REFID=53552
THOMA	08	PL B659 87	U. Thoma <i>et al.</i>	(CB-ELSA Collab.)	REFID=52087
DRECHSEL	07	EPJ A34 69	D. Drechsel, S.S. Kamalov, L. Tiator	(MAINZ, JINR)	REFID=52105
DUGGER	07	PR C76 025211	M. Dugger <i>et al.</i>	(Jefferson Lab CLAS Collab.)	REFID=52039
ARNNDT	06	PR C74 045205	R.A. Arndt <i>et al.</i>	(GWU)	REFID=51535
PDG	06	JPG 33 1	W.-M. Yao <i>et al.</i>	(PDG Collab.)	REFID=51004
ARNNDT	04	PR C69 035213	R.A. Arndt <i>et al.</i>	(GWU, TRIU)	REFID=49947
VRANA	00	PRPL 328 181	T.P. Vrana, S.A. Dytman., T.-S.H. Lee	(PITT+)	REFID=47593
ARNNDT	96	PR C53 430	R.A. Arndt, I.I. Strakovsky, R.L. Workman	(VPI)	REFID=44675
ARNNDT	95	PR C52 2120	R.A. Arndt <i>et al.</i>	(VPI, BRCO)	REFID=44535
HOEHLER	93	πN Newsletter 9 1	G. Hohler	(KARL)	REFID=43821
LI	93	PR C47 2759	Z.J. Li <i>et al.</i>	(VPI)	REFID=43327
MANLEY	92	PR D45 4002	D.M. Manley, E.M. Saleski	(KSA) IJP	REFID=41535
Also		PR D30 904	D.M. Manley <i>et al.</i>	(VPI)	REFID=30071
ARNNDT	91	PR D43 2131	R.A. Arndt <i>et al.</i>	(VPI, TELE) IJP	REFID=41467
BELL	83	NP B222 389	K.W. Bell <i>et al.</i>	(RL) IJP	REFID=30409
CRAWFORD	83	NP B211 1	R.L. Crawford, W.T. Morton	(GLAS)	REFID=30070
PDG	82	PL 11B 1	M. Roos <i>et al.</i>	(HELS, CIT, CERN)	REFID=41167
AWAJI	81	Bonn Conf. 352	N. Awaji, R. Kajikawa	(NAGO)	REFID=30067
Also		NP B197 365	K. Fujii <i>et al.</i>	(NAGO)	REFID=30068
FUJII	81	NP B187 53	K. Fujii <i>et al.</i>	(NAGO, OSAK)	REFID=30069
CUTKOSKY	80	Toronto Conf. 19	R.E. Cutkosky <i>et al.</i>	(CMU, LBL) IJP	REFID=30064
Also		PR D20 2839	R.E. Cutkosky <i>et al.</i>	(CMU, LBL) IJP	REFID=40096
SAXON	80	NP B162 522	D.H. Saxon <i>et al.</i>	(RHEL, BRIS) IJP	REFID=30404
HOEHLER	79	PDAT 12-1	G. Hohler <i>et al.</i>	(KARLT) IJP	REFID=30058
Also		Toronto Conf. 3	R. Koch	(KARLT) IJP	REFID=30859
LONGACRE	78	PR D17 1795	R.S. Longacre <i>et al.</i>	(LBL, SLAC)	REFID=30054
LONGACRE	77	NP B122 493	R.S. Longacre, J. Dolbeau	(SACL) IJP	REFID=30051
Also		NP B108 365	J. Dolbeau <i>et al.</i>	(SACL) IJP	REFID=30052
LONGACRE	75	PL 55B 415	R.S. Longacre <i>et al.</i>	(LBL, SLAC) IJP	REFID=30047

NODE=B064

NODE=B064;LINKAGE=L7

NODE=B064;LINKAGE=L5

NODE=B010;LINKAGE=H9

NODE=B064;LINKAGE=L8

NODE=B064;LINKAGE=C

NODE=B064;LINKAGE=X

NODE=B064

NODE=B064